CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

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ORDER R5-2016-0020-01
NPDES NO. CA0077682

WASTE DISCHARGE REQUIREMENTS FOR THE SACRAMENTO REGIONAL COUNTY SANITATION DISTRICT SACRAMENTO REGIONAL WASTEWATER TREATMENT PLANT SACRAMENTO COUNTY

The following Discharger is subject to waste discharge requirements (WDR's) set forth in this Order:

Table 1. Discharger Information

Discharger	Sacramento Regional County Sanitation District
Name of Facility	Sacramento Regional Wastewater Treatment Plant
Facility Address	8521 Laguna Station Road
	Elk Grove, CA 95758
	Sacramento County

Table 2. Discharge Location

Discharge Point	Effluent Description	Discharge Point Latitude (North)	Discharge Point Longitude (West)	Receiving Water
001	Treated Municipal Wastewater	38° 27' 15"	121° 30' 00"	Sacramento River

Table 3. Administrative Information

This Order was adopted on:	**21 April 2016**
This Order shall become effective on:	**1 June 2016**
This Order shall expire on:	**31 May 2021**
The Discharger shall file a Report of Waste Discharge as an application for reissuance of WDR's in accordance with title 23, California Code of Regulations, and an application for reissuance of a National Pollutant Discharge Elimination System (NPDES) permit no later than:	**2 December 2020**
The U.S. Environmental Protection Agency (U.S. EPA) and the California Regional Water Quality Control Board, Central Valley Region have classified this discharge as follows:	**Major**

I, Pamela C. Creedon, Executive Officer, do hereby certify that this Order with all attachments is a full, true, and correct copy of the Order adopted by the California Regional Water Quality Control Board, Central Valley Region, on **21 April 2016,** and Order R5-2018-0058 on **2 August 2018**.

Original Signed By
PAMELA C. CREEDON, Executive Officer

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TABLES

ATTACHMENTS

I. FACILITY INFORMATION

Information describing the Sacramento Regional County Sanitation District, Sacramento Regional Wastewater Treatment Plant (Facility) is summarized in Table 1 and in sections I and II of the Fact Sheet (Attachment F). Section I of the Fact Sheet also includes information regarding the Facility's permit application.

II. FINDINGS

The California Regional Water Quality Control Board, Central Valley Region (hereinafter Central Valley Water Board), finds:

A. **Legal Authorities.** This Order serves as WDR's pursuant to article 4, chapter 4, division 7 of the California Water Code (commencing with section 13260).This Order is also issued pursuant to section 402 of the federal Clean Water Act (CWA) and implementing regulations adopted by the U.S. EPA and chapter 5.5, division 7 of the Water Code (commencing with section 13370). It shall serve as an NPDES permit for point source discharges from this Facility to surface waters.

B. **Background and Rationale for Requirements.** The Central Valley Water Board developed the requirements in this Order based on information submitted as part of the application, through monitoring and reporting programs, and other available information. The Fact Sheet (Attachment F), which contains background information and rationale for the requirements in this Order, is hereby incorporated into and constitutes Findings for this Order. Attachments A through E and G through I are also incorporated into this Order.

C. **Provisions and Requirements Implementing State Law.** The provisions/requirements in subsections III.A (pertaining to recycled water use), IV.B, IV.C, VI. C.5.b, and V.B are included to implement state law only. These provisions/requirements are not required or authorized under the federal CWA; consequently, violations of these provisions/requirements are not subject to the enforcement remedies that are available for NPDES violations.

D. **Monitoring and Reporting.** 40 C.F.R. section 122.48 requires that all NPDES permits specify requirements for recording and reporting monitoring results. Water Code sections 13267 and 13383 authorize the Central Valley Water Board to require technical and monitoring reports. The Monitoring and Reporting Program establishes monitoring and reporting requirements to implement federal and State requirements. The Monitoring and Reporting Program is provided in Attachment E.

The technical and monitoring reports in this Order are required in accordance with Water Code section 13267, which states the following in subsection (b)(1), *"In conducting an investigation specified in subdivision (a), the regional board may require that any person who has discharged, discharges, or is suspected of having discharged discharging, or who proposes to discharge waste within its region, or any citizen or domiciliary, or political agency or entity of this state who has discharged, discharges, or is suspected of having discharged or discharging, or who proposes to discharge, waste outside of its region could affect the quality of waters within its region shall furnish, under penalty of perjury, technical or monitoring program reports which the regional board requires. The burden, including costs, of these reports shall bear a reasonable relationship to the need for the report and the benefits to be obtained from the reports. In requiring those reports, the regional board shall provide the person with a written explanation with regard to the need for the reports, and shall identify the evidence that supports requiring that person to provide the reports."*

The Discharger owns and operates the Facility subject to this Order. The monitoring reports required by this Order are necessary to determine compliance with this Order. The need for the monitoring reports is discussed in the Fact Sheet.

E. **Notification of Interested Parties.** The Central Valley Water Board has notified the Discharger and interested agencies and persons of its intent to prescribe WDR's for the discharge and has provided them with an opportunity to submit their written comments and recommendations. Details of the notification are provided in the Fact Sheet.

F. **Consideration of Public Comment.** The Central Valley Water Board, in a public meeting, heard and considered all comments pertaining to the discharge. Details of the Public Hearing are provided in the Fact Sheet.

THEREFORE, IT IS HEREBY ORDERED that Waste Discharge Requirements Order R5-2010-0114-04 and Time Schedule Order R5-2010-0115-01 are rescinded upon the effective date of this Order except for enforcement purposes, and, in order to meet the provisions contained in division 7 of the Water Code (commencing with section 13000) and regulations adopted thereunder, and the provisions of the CWA and regulations and guidelines adopted thereunder, the Discharger shall comply with the requirements in this Order. This action in no way prevents the Central Valley Water Board from taking enforcement action for past violations of the previous Order.

III. DISCHARGE PROHIBITIONS

A. Discharge of wastewater from the Facility, as the Facility is specifically described in the Fact Sheet in section II.B, in a manner different from that described in this Order is prohibited, with the exception of the disinfected secondary effluent that may be reclaimed for dust control and compaction on construction projects, landscape irrigation, wash down water, vehicle washing and grounds maintenance within the Facility boundaries, and for flushing of pipelines within the sewer collection system. It may also be used for in-plant process water and fire protection and used in the tertiary treatment plant and distribution system. Any use of reclaimed disinfected secondary effluent must meet the requirements of California Code of Regulations, title 22, section 60301, et seq. and the associated State Water Resources Control Board (State Water Board), Division of Drinking Water (DDW) guidelines as applicable. Runoff of disinfected secondary effluent is prohibited except as regulated by Master Reclamation Permit No. 97-146.

B. The by-pass or overflow of wastes to surface waters is prohibited, except as allowed by Federal Standard Provisions I.G. and I.H. (Attachment D) and as described in section II of the Fact Sheet (Attachment F) for the groundwater Corrective Action Program (CAP).

C. Neither the discharge nor its treatment shall create a nuisance as defined in section 13050 of the Water Code.

D. The Discharger shall not allow pollutant-free wastewater to be discharged into the treatment or disposal system in amounts that significantly diminish the system's capability to comply with this Order. Pollutant-free wastewater means rainfall, groundwater, cooling waters, and condensates that are essentially free of pollutants.

E. Discharge to the Sacramento River is prohibited when the Sacramento River instantaneous flow is less than 1,300 cubic feet per second (cfs) at Monitoring Location RSWU-001.

F. Discharge to the Sacramento River is prohibited when there is less than a 14:1 (river:effluent) flow ratio over a rolling one-hour period available in the Sacramento River at RSWU-001.

IV. EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

A. Effluent Limitations – Discharge Point 001

1. Final Effluent Limitations – Discharge Point 001

The Discharger shall maintain compliance with the following effluent limitations at Discharge Point 001, with compliance measured at Monitoring Locations TER-001 and EFF-001 as described in the Monitoring and Reporting Program, Attachment E:

a. The Discharger shall maintain compliance with the effluent limitations specified in Table 4:

Table 4. Effluent Limitations

Parameter	Units	Effluent Limitations				
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Conventional Pollutants						
Biochemical Oxygen Demand (5-day @ 20°C)[1,3]	mg/L	10	15	20	--	--
	lbs/day[2]	15,100	22,700	30,200	--	--
pH	standard units	--	--	--	6.0	8.0
Total Suspended Solids[1,3]	mg/L	10	15	20	--	--
	lbs/day[2]	15,100	22,700	30,200	--	--
Priority Pollutants						
Bis (2-Ethylhexyl) Phthalate	µg/L	8.9	--	20	--	--
Carbon Tetrachloride	µg/L	2.9	--	5.3	--	--
Chlorodibromomethane	µg/L	14	--	27	--	--
Copper, Total Recoverable	µg/L	8.6	--	12	--	--
Cyanide, Total (as CN)	µg/L	13	--	22	--	--
Dichlorobromomethane	µg/L	23	--	36	--	--
Methylene Chloride	µg/L	4.7	--	11	--	--
Non-Conventional Pollutants						
Ammonia Nitrogen, Total (as N)[1] 1 April – 31 October	mg/L	1.5	1.7	--	--	--
	lbs/day[2]	2,264	2,566	--	--	--
Ammonia Nitrogen, Total (as N)[1] 1 November – 31 March	mg/L	2.4	3.0	--	--	--
	lbs/day[2]	3,622	4,529	--	--	--
Nitrate Plus Nitrite (as N)	mg/L	10	22	--	--	--
Settleable Solids	mL/L	0.1	0.2	--	--	--

1 This Order includes interim effluent limitations for 5-day biochemical oxygen demand (BOD_5), total suspended solids (TSS), and total ammonia nitrogen in section IV.A.2. Effective immediately, the interim effluent limitations shall apply in lieu of final effluent limitations for these constituents. The final effluent limitations for BOD_5 and TSS become effective 9 May 2023 and the final effluent limitations for total ammonia nitrogen become effective 11 May 2021.

2 Based on an average dry weather flow of 181 million gallons per day (MGD).

3 Effective 9 May 2023 and upon written Executive Officer approval per Special Provisions VI.C.2.d, compliance with final effluent limitations for BOD_5 and TSS shall be measured at Monitoring Location TER-001. Otherwise, compliance shall be measured at Monitoring Location EFF-001.

b. **Percent Removal:** The average monthly percent removal of 5-day biochemical oxygen demand (BOD_5) and total suspended solids (TSS) shall not be less than 85 percent. [1]

c. **Acute Whole Effluent Toxicity.** Survival of aquatic organisms in 96-hour bioassays of undiluted waste shall be no less than:

i. 70%, minimum for any one bioassay; and
ii. 90%, median for any three consecutive bioassays.

d. **Chronic Whole Effluent Toxicity.** There shall be no chronic toxicity in the effluent discharge.

e. **Temperature.**

i. **Effective immediately,** the maximum temperature of the discharge shall not exceed the natural receiving water temperature at Monitoring Location RSWU-001 by more than 20°F.

ii. **If the Central Valley Water Board receives concurrence from the State Water Board regarding the Thermal Plan exceptions[2], the following effluent limitation applies in lieu of the effluent limitation in section IV.A.1.e.i,** the maximum temperature of the discharge shall not exceed the natural receiving water temperature at Monitoring Location RSWU-001 by more than 20°F from 1 May through 30 September and more than 25°F from 1 October through 30 April.

f. **Total Residual Chlorine[3].** Effluent total residual chlorine shall not exceed:

i. 0.011 mg/L, as a 4-day average; and
ii. 0.019 mg/L, as a 1-hour average.

g. **Total Coliform Organisms [4].** Effluent total coliform organisms shall not exceed:

i. **May – October**

(a) 2.2 most probable number (MPN) per 100 mL, as a 7-day median;
(b) 23 MPN/100 mL, more than once in any 30-day period; and
(c) 240 MPN/100 mL, at any time.

ii. **November – April**

(a) 2.2 most probable number (MPN) per 100 mL, as a monthly median;
(b) 23 MPN/100 mL, as a weekly median; and
(c) 240 MPN/100 mL, at any time.

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[1] Effective 9 May 2023 and upon written Executive Officer approval per Special Provisions VI.C.2.d, compliance with final effluent limitations for the percent removal of BOD_5 and TSS (IV.A.1.b) shall be measured at Monitoring Location TER-001. Otherwise, compliance shall be measured at Monitoring Location EFF-001.

[2] See Attachment F, Section III.C.1.c for details regarding the Thermal Plan exceptions.

[3] This Order includes interim effluent limitations for total residual chlorine in section IV.A.2.c. Effective immediately, the interim effluent limitations shall apply in lieu of final effluent limitations for these constituents. The final effluent limitations for total residual chlorine become effective 1 December 2020.

[4] This Order includes interim effluent limitations for total coliform organisms in section IV.A.2.d. Effective immediately, the interim effluent limitations shall apply in lieu of final effluent limitations. The final effluent limitations for total coliform organisms become effective 9 May 2023. Upon written Executive Officer approval per Special Provisions VI.C.2.d, the monitoring for total coliform organisms shall be discontinued at Monitoring Location EFF-001 and shall be conducted at Monitoring Location TER-001.

h. **Average Dry Weather Flow.** The average dry weather discharge flow shall not exceed 181 MGD.

i. **Diazinon and Chlorpyrifos.** Effluent diazinon and chlorpyrifos concentrations shall not exceed the sum of one (1.0) as identified below:

i. **Average Monthly Effluent Limitation**

$$\text{SAMEL} = \frac{C_{D\,M-avg}}{0.079} + \frac{C_{C\,M-avg}}{0.012} \leq 1.0$$

$C_{D\,M\text{-}avg}$ = average monthly diazinon effluent concentration in µg/L.
$C_{C\,M\text{-}avg}$ = average monthly chlorpyrifos effluent concentration in µg/L.

ii. **Average Weekly Effluent Limitation**

$$\text{SAWEL} = \frac{C_{D\,W-avg}}{0.14} + \frac{C_{C\,W-avg}}{0.021} \leq 1.0$$

$C_{D\,W\text{-}avg}$ = average weekly diazinon effluent concentration in µg/L.
$C_{C\,W\text{-}avg}$ = average weekly chlorpyrifos effluent concentration in µg/L.

j. **Methylmercury. Effective 31 December 2030,** the effluent calendar year annual methylmercury load shall not exceed 89 grams, in accordance with the Delta Mercury Control Program.

k. **Electrical Conductivity.** The effluent calendar year annual average electrical conductivity shall not exceed 1,139 µmhos/cm.

2. Interim Effluent Limitations

The Discharger shall maintain compliance with the following interim effluent limitations at Discharge Point 001, with compliance measured at Monitoring Location EFF-001 as described in the Monitoring and Reporting Program, Attachment E. These interim effluent limitations shall apply in lieu of the corresponding final effluent limitations specified for the same parameters during the time period indicated in this provision.

a. **BOD_5 and TSS. Effective immediately and until 8 May 2023**, the Discharger shall maintain compliance with the effluent limitations specified in Table 5.

Table 5. Interim Effluent Limitations – BOD_5 and TSS

Parameter	Units	Effluent Limitations				
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Biochemical Oxygen Demand (5-day @ 20°C)	mg/L	30	45	60	--	--
	lbs/day[1]	45,286	67,929	90,572	--	--
Total Suspended Solids	mg/L	30	45	60	--	--
	lbs/day[1]	45,286	67,929	90,572	--	--

[1] Based on an average dry weather flow of 181 MGD.

b. **Ammonia. Effective immediately and until 10 May 2021**, the Discharger shall maintain compliance with the effluent limitations specified in Table 6.

Table 6. Interim Effluent Limitations – Ammonia

Parameter	Units	Effluent Limitations				
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Ammonia Nitrogen, Total (as N)	mg/L	39	43	47	--	--
	lbs/day	49,400	52,920	67,929	--	--

c. **Total Residual Chlorine. Effective immediately and until 30 November 2020**, effluent total residual chlorine shall not exceed:

i. 0.011 mg/L, as a monthly average; and
ii. 0.018 mg/L, as a daily average.

d. **Total Coliform Organisms. Effective immediately and until 8 May 2023**, effluent total coliform organisms shall not exceed:

i. 23 MPN/100 mL, as a weekly median; and
ii. 500 MPN/100 mL, in any 2 consecutive days as a daily maximum.

e. **Mercury, total. Effective immediately and until 30 December 2030,** the effluent calendar year annual total mercury load shall not exceed 1,043 grams/year. This interim effluent limitation shall apply in lieu of the final effluent limitation for methylmercury (Section IV.A.1.j).

B. Land Discharge Specifications – Not Applicable

C. Recycling Specifications – Not Applicable

V. RECEIVING WATER LIMITATIONS

A. Surface Water Limitations

The discharge shall not cause the following in the Sacramento River and the Sacramento-San Joaquin Delta:

1. **Bacteria.** The fecal coliform concentration, based on a minimum of not less than five samples for any 30-day period, to exceed a geometric mean of 200 MPN/100 mL, nor more than 10 percent of the total number of fecal coliform samples taken during any 30-day period to exceed 400 MPN/100 mL.
2. **Biostimulatory Substances.** Water to contain biostimulatory substances which promote aquatic growths in concentrations that cause nuisance or adversely affect beneficial uses.
3. **Chemical Constituents.** Chemical constituents to be present in concentrations that adversely affect beneficial uses.
4. **Color.** Discoloration that causes nuisance or adversely affects beneficial uses.
5. **Dissolved Oxygen.** The dissolved oxygen concentration to be reduced below 7.0 mg/L at any time.
6. **Floating Material.** Floating material to be present in amounts that cause nuisance or adversely affect beneficial uses.

7. **Oil and Grease.** Oils, greases, waxes, or other materials to be present in concentrations that cause nuisance, result in a visible film or coating on the surface of the water or on objects in the water, or otherwise adversely affect beneficial uses.

8. **pH.** The pH to be depressed below 6.5 nor raised above 8.5.

9. **Pesticides:**

   a. Pesticides to be present, individually or in combination, in concentrations that adversely affect beneficial uses;

   b. Pesticides to be present in bottom sediments or aquatic life in concentrations that adversely affect beneficial uses;

   c. Total identifiable persistent chlorinated hydrocarbon pesticides to be present in the water column at concentrations detectable within the accuracy of analytical methods approved by U.S. EPA or the Executive Officer;

   d. Pesticide concentrations to exceed those allowable by applicable antidegradation policies (see State Water Board Resolution No. 68-16 and 40 C.F.R. 131.12.);

   e. Pesticide concentrations to exceed the lowest levels technically and economically achievable;

   f. Pesticides to be present in concentration in excess of the maximum contaminant levels (MCL's) set forth in CCR, Title 22, division 4, chapter 15; nor

   g. Thiobencarb to be present in excess of 1.0 µg/L.

10. **Radioactivity:**

    a. Radionuclides to be present in concentrations that are harmful to human, plant, animal, or aquatic life nor that result in the accumulation of radionuclides in the food web to an extent that presents a hazard to human, plant, animal, or aquatic life.

    b. Radionuclides to be present in excess of the MCL's specified in Table 64442 of section 64442 and Table 64443 of section 64443 of Title 22 of the California Code of Regulations.

11. **Suspended Sediments.** The suspended sediment load and suspended sediment discharge rate of surface waters to be altered in such a manner as to cause nuisance or adversely affect beneficial uses.

12. **Settleable Substances.** Substances to be present in concentrations that result in the deposition of material that causes nuisance or adversely affects beneficial uses.

13. **Suspended Material.** Suspended material to be present in concentrations that cause nuisance or adversely affect beneficial uses.

14. **Taste and Odors.** Taste- or odor-producing substances to be present in concentrations that impart undesirable tastes or odors to fish flesh or other edible products of aquatic origin, or that cause nuisance, or otherwise adversely affect beneficial uses.

15. **Temperature:**

    a. **Effective immediately,**

        i. The discharge shall not create a zone, defined by a water temperature of 1°F or more above natural receiving water temperature which exceeds 25 percent of the cross sectional area of the river.

    b. **If the Central Valley Water Board receives concurrence from the State Water Board regarding the Thermal Plan exceptions[1], the following limitations will apply in lieu of the limitations in section V.A.15.a,**

        i. If the natural receiving water temperature is less than 65°F, the discharge shall not create a zone, defined by water temperature of more than 2°F above natural temperature, which exceeds 25 percent of the cross sectional area of the river at any point outside the zone of initial dilution.

        ii. If the natural receiving water temperature is 65°F or greater, the discharge shall not create a zone, defined by a water temperature of 1°F or more above natural receiving water temperature which exceeds 25 percent of the cross sectional area of the river at any point outside the zone of initial dilution for more than 1 hour per day as an average in any month.

    c. **Effective immediately,** the discharge shall not cause the receiving water surface temperature to increase more than 4°F above the ambient temperature of the receiving water at any time or place.

16. **Toxicity.** Toxic substances to be present, individually or in combination, in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life.

17. **Turbidity:**

    a. Shall not exceed 2 Nephelometric Turbidity Units (NTU) where natural turbidity is less than 1 NTU;

    b. Shall not increase more than 1 NTU where natural turbidity is between 1 and 5 NTUs;

    c. Shall not increase more than 20 percent where natural turbidity is between 5 and 50 NTUs;

    d. Shall not increase more than 10 NTU where natural turbidity is between 50 and 100 NTUs; nor

    e. Shall not increase more than 10 percent where natural turbidity is greater than 100 NTUs.

B. Groundwater Limitations

The release of waste constituents from any transport, storage, treatment, or disposal component associated with the Facility shall not cause the underlying groundwater to be degraded.

[1] See Attachment F, Section III.C.1.c for details regarding the Thermal Plan exceptions.

VI. PROVISIONS

A. Standard Provisions

1. The Discharger shall comply with all Standard Provisions included in Attachment D.
2. The Discharger shall comply with the following provisions. In the event that there is any conflict, duplication, or overlap between provisions specified by this Order, the more stringent provision shall apply:

   a. If the Discharger's wastewater treatment plant is publicly owned or subject to regulation by California Public Utilities Commission, it shall be supervised and operated by persons possessing certificates of appropriate grade according to Title 23, CCR, division 3, chapter 26.

   b. After notice and opportunity for a hearing, this Order may be terminated or modified for cause, including, but not limited to:

      i. violation of any term or condition contained in this Order;

      ii. obtaining this Order by misrepresentation or by failing to disclose fully all relevant facts;

      iii. a change in any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge; and

      iv. a material change in the character, location, or volume of discharge.

      The causes for modification include:

      i. *New regulations.* New regulations have been promulgated under section 405(d) of the CWA, or the standards or regulations on which the permit was based have been changed by promulgation of amended standards or regulations or by judicial decision after the permit was issued.

      ii. *Land application plans.* When required by a permit condition to incorporate a land application plan for beneficial reuse of sewage sludge, to revise an existing land application plan, or to add a land application plan.

      iii. *Change in sludge use or disposal practice.* Under 40 C.F.R. section 122.62(a)(1), a change in the Discharger's sludge use or disposal practice is a cause for modification of the permit. It is cause for revocation and reissuance if the Discharger requests or agrees.

      The Central Valley Water Board may review and revise this Order at any time upon application of any affected person or the Central Valley Water Board's own motion.

   c. If a toxic effluent standard or prohibition (including any scheduled compliance specified in such effluent standard or prohibition) is established under section 307(a) of the CWA, or amendments thereto, for a toxic pollutant that is present in the discharge authorized herein, and such standard or prohibition is more stringent than any limitation upon such pollutant in this Order, the Central Valley Water Board will revise or modify this Order in accordance with such toxic effluent standard or prohibition.

      The Discharger shall comply with effluent standards and prohibitions within the time provided in the regulations that establish those standards or prohibitions, even if this Order has not yet been modified.

   d. This Order shall be modified, or alternately revoked and reissued, to comply with any applicable effluent standard or limitation issued or approved under sections

301(b)(2)(C) and (D), 304(b)(2), and 307(a)(2) of the CWA, if the effluent standard or limitation so issued or approved:

i. Contains different conditions or is otherwise more stringent than any effluent limitation in the Order; or

ii. Controls any pollutant limited in the Order.

The Order, as modified or reissued under this paragraph, shall also contain any other requirements of the CWA then applicable.

e. The provisions of this Order are severable. If any provision of this Order is found invalid, the remainder of this Order shall not be affected.

f. The Discharger shall take all reasonable steps to minimize any adverse effects to waters of the State or users of those waters resulting from any discharge or sludge use or disposal in violation of this Order. Reasonable steps shall include such accelerated or additional monitoring as necessary to determine the nature and impact of the non-complying discharge or sludge use or disposal.

g. The Discharger shall ensure compliance with any existing or future pretreatment standard promulgated by U.S. EPA under section 307 of the CWA, or amendment thereto, for any discharge to the municipal system.

h. A copy of this Order shall be maintained at the discharge facility and be available at all times to operating personnel. Key operating personnel shall be familiar with its content.

i. Safeguard to electric power failure:

i. The Discharger shall provide safeguards to assure that, should there be reduction, loss, or failure of electric power, the discharge shall comply with the terms and conditions of this Order.

ii. Upon written request by the Central Valley Water Board, the Discharger shall submit a written description of safeguards. Such safeguards may include alternate power sources, standby generators, retention capacity, operating procedures, or other means. A description of the safeguards provided shall include an analysis of the frequency, duration, and impact of power failures experienced over the past 5 years on effluent quality and on the capability of the Discharger to comply with the terms and conditions of the Order. The adequacy of the safeguards is subject to the approval of the Central Valley Water Board.

iii. Should the treatment works not include safeguards against reduction, loss, or failure of electric power, or should the Central Valley Water Board not approve the existing safeguards, the Discharger shall, within 90 days of having been advised in writing by the Central Valley Water Board that the existing safeguards are inadequate, provide to the Central Valley Water Board and U.S. EPA a schedule of compliance for providing safeguards such that in the event of reduction, loss, or failure of electric power, the Discharger shall comply with the terms and conditions of this Order. The schedule of compliance shall, upon approval of the Central Valley Water Board, become a condition of this Order.

j. The Discharger, upon written request of the Central Valley Water Board, shall file with the Board a technical report on its preventive (failsafe) and contingency (cleanup) plans for controlling accidental discharges, and for minimizing the effect of

such events. This report may be combined with that required under the Central Valley Water Board Standard Provision contained in section VI.A.2.i of this Order.

The technical report shall:

i. Identify the possible sources of spills, leaks, untreated waste by-pass, and contaminated drainage. Loading and storage areas, power outage, waste treatment unit outage, and failure of process equipment, tanks and pipes should be considered.

ii. Evaluate the effectiveness of present facilities and procedures and state when they became operational.

iii. Predict the effectiveness of the proposed facilities and procedures and provide an implementation schedule containing interim and final dates when they will be constructed, implemented, or operational.

The Central Valley Water Board, after review of the technical report, may establish conditions which it deems necessary to control accidental discharges and to minimize the effects of such events. Such conditions shall be incorporated as part of this Order, upon notice to the Discharger.

k. A publicly owned treatment works whose waste flow has been increasing, or is projected to increase, shall estimate when flows will reach hydraulic and treatment capacities of its treatment and disposal facilities. The projections shall be made in January, based on the last 3 years' average dry weather flows, peak wet weather flows and total annual flows, as appropriate. When any projection shows that capacity of any part of the facilities may be exceeded in 4 years, the Discharger shall notify the Central Valley Water Board by 31 January. A copy of the notification shall be sent to appropriate local elected officials, local permitting agencies and the press. Within 120 days of the notification, the Discharger shall submit a technical report showing how it will prevent flow volumes from exceeding capacity or how it will increase capacity to handle the larger flows. The Central Valley Water Board may extend the time for submitting the report.

l. The Discharger shall submit technical reports as directed by the Executive Officer. All technical reports required herein that involve planning, investigation, evaluation, or design, or other work requiring interpretation and proper application of engineering or geologic sciences, shall be prepared by or under the direction of persons registered to practice in California pursuant to California Business and Professions Code, sections 6735, 7835, and 7835.1. To demonstrate compliance with Title 16, CCR, sections 415 and 3065, all technical reports must contain a statement of the qualifications of the responsible registered professional(s). As required by these laws, completed technical reports must bear the signature(s) and seal(s) of the registered professional(s) in a manner such that all work can be clearly attributed to the professional responsible for the work.

m. The Central Valley Water Board is authorized to enforce the terms of this permit under several provisions of the Water Code, including, but not limited to, sections 13385, 13386, and 13387.

n. Prior to making any change in the point of discharge, place of use, or purpose of use of treated wastewater that results in a permanent decrease of flow in any portion of a watercourse, the Discharger must file a petition with the State Water Board, Division of Water Rights, and receive approval for such a change. (Water Code section 1211).

o. In the event of any change in control or ownership of land or waste discharge facilities presently owned or controlled by the Discharger, the Discharger shall notify the succeeding owner or operator of the existence of this Order by letter, a copy of which shall be immediately forwarded to the Central Valley Water Board.

To assume operation under this Order, the succeeding owner or operator must apply in writing to the Executive Officer requesting transfer of the Order. The request must contain the requesting entity's full legal name, the state of incorporation if a corporation, address and telephone number of the persons responsible for contact with the Central Valley Water Board and a statement. The statement shall comply with the signatory and certification requirements in the federal Standard Provisions (Attachment D, section V.B) and state that the new owner or operator assumes full responsibility for compliance with this Order. Failure to submit the request shall be considered a discharge without requirements, a violation of the Water Code. Transfer shall be approved or disapproved in writing by the Executive Officer.

p. Failure to comply with provisions or requirements of this Order, or violation of other applicable laws or regulations governing discharges from this facility, may subject the Discharger to administrative or civil liabilities, criminal penalties, and/or other enforcement remedies to ensure compliance. Additionally, certain violations may subject the Discharger to civil or criminal enforcement from appropriate local, state, or federal law enforcement entities.

q. In the event the Discharger does not comply or will be unable to comply for any reason, with any prohibition, effluent limitation, or receiving water limitation of this Order, the Discharger shall notify the Central Valley Water Board by telephone (916) 464-3291 within 24 hours of having knowledge of such noncompliance, and shall confirm this notification in writing within five days, unless the Central Valley Water Board waives confirmation. The written notification shall state the nature, time, duration, and cause of noncompliance, and shall describe the measures being taken to remedy the current noncompliance and prevent recurrence including, where applicable, a schedule of implementation. Other noncompliance requires written notification as above at the time of the normal monitoring report.

B. Monitoring and Reporting Program (MRP) Requirements

The Discharger shall comply with the MRP, and future revisions thereto, in Attachment E.

C. Special Provisions

1. Reopener Provisions

a. Conditions that necessitate a major modification of a permit are described in 40 C.F.R. section 122.62, including, but not limited to:

i. If new or amended applicable water quality standards are promulgated or approved pursuant to section 303 of the CWA, or amendments thereto, this permit may be reopened and modified in accordance with the new or amended standards.

ii. When new information, that was not available at the time of permit issuance, would have justified different permit conditions at the time of issuance.

b. This Order may be reopened for modification, or revocation and reissuance, as a result of the detection of a reportable priority pollutant generated by special conditions included in this Order. These special conditions may be, but are not

limited to, fish tissue sampling, whole effluent toxicity, monitoring requirements on internal waste stream(s), and monitoring for surrogate parameters. Additional requirements may be included in this Order as a result of the special condition monitoring data.

c. **Mercury.** The Basin Plan's Delta Mercury Control Program was designed to proceed in two phases. After Phase 1, the Central Valley Water Board will conduct a Phase 1 Delta Mercury Control Program Review that considers modification to the Delta Mercury Control Program. This Order may be reopened to address changes to the Delta Mercury Control Program.

d. **Whole Effluent Toxicity.** As a result of a Toxicity Reduction Evaluation (TRE), this Order may be reopened to include a numeric chronic toxicity limitation, a new acute toxicity limitation, and/or a limitation for a specific toxicant identified in the TRE. Additionally, if the State Water Board revises the SIP's toxicity control provisions that would require the establishment of numeric chronic toxicity effluent limitations, this Order may be reopened to include a numeric chronic toxicity effluent limitation based on the new provisions.

e. **Water Effects Ratios (WER's) and Metal Translators.** A default WER of 1.0 has been used in this Order for calculating criteria for applicable inorganic constituents. In addition, default dissolved-to-total metal translators have been used to convert water quality objectives from dissolved to total recoverable when developing effluent limitations for copper. If the Discharger performs studies to determine site-specific WER's and/or site-specific dissolved-to-total metal translators, this Order may be reopened to modify the effluent limitations for the applicable inorganic constituents.

f. **Drinking Water Policy.** On 26 July 2013 the Central Valley Water Board adopted Resolution No. R5-2013-0098 amending the Basin Plan and establishing a Drinking Water Policy. The State Water Board approved the Drinking Water Policy on 3 December 2013. This Order may be reopened to incorporate monitoring of drinking water constituents to implement the Drinking Water Policy.

g. **Electrical Conductivity (EC) Effluent Limits and Other Limits Based on Facility Performance.** This Order may be reopened to revise interim and/or final effluent limitations where Facility performance was considered in the development of the limitations (e.g., performance-based effluent limitations for EC) should the Discharger provide new information demonstrating the increase in discharge concentrations have been caused by water conservation efforts, drought conditions, and/or the change in disinfection chemicals.

2. **Special Studies, Technical Reports and Additional Monitoring Requirements**

a. **Toxicity Reduction Evaluation Requirements.** For compliance with the Basin Plan's narrative toxicity objective, this Order requires the Discharger to conduct chronic whole effluent toxicity (WET) testing, as specified in MRP section V. Furthermore, this Provision requires the Discharger to investigate the causes of, and identify corrective actions to reduce or eliminate effluent toxicity. If the discharge exceeds the numeric toxicity monitoring trigger during accelerated monitoring established in this Provision, the Discharger is required to initiate a TRE in accordance with an approved TRE Work Plan, and take actions to mitigate the impact of the discharge and prevent recurrence of toxicity. A TRE is a site-specific study conducted in a stepwise process to identify the source(s) of toxicity and the effective control measures for effluent toxicity. TRE's are designed to identify the causative agents and sources of whole effluent toxicity, evaluate the effectiveness

of the toxicity control options, and confirm the reduction in effluent toxicity. This Provision includes procedures for accelerated chronic toxicity monitoring and TRE initiation.

i. **Accelerated Monitoring and TRE Initiation.** When the numeric toxicity monitoring trigger is exceeded during regular chronic toxicity monitoring, and the testing meets all test acceptability criteria, the Discharger shall initiate accelerated monitoring as required in the Accelerated Monitoring Specifications. The Discharger shall initiate a TRE to address effluent toxicity if any WET testing results exceed the numeric toxicity monitoring trigger during accelerated monitoring.

ii. **Numeric Toxicity Monitoring Trigger.** The numeric toxicity monitoring trigger to initiate a TRE is 8 TUc (where TUc = 100/NOEC). The monitoring trigger is not an effluent limitation; it is the toxicity threshold at which the Discharger is required to begin accelerated monitoring and initiate a TRE.

iii. **Accelerated Monitoring Specifications.** If the numeric toxicity monitoring trigger is exceeded during regular chronic toxicity testing, the Discharger shall initiate accelerated monitoring within 14-days of notification by the laboratory of the exceedance. Accelerated monitoring shall consist of four chronic toxicity tests conducted once every two weeks using the species that exhibited toxicity. The following protocol shall be used for accelerated monitoring and TRE initiation:

(a) If the results of four consecutive accelerated monitoring tests do not exceed the monitoring trigger, the Discharger may cease accelerated monitoring and resume regular chronic toxicity monitoring. However, notwithstanding the accelerated monitoring results, if there is adequate evidence of a pattern of effluent toxicity, the Executive Officer may require that the Discharger initiate a TRE.

(b) If the source(s) of the toxicity is easily identified (e.g., temporary plant upset), the Discharger shall make necessary corrections to the facility and shall continue accelerated monitoring until four consecutive accelerated tests do not exceed the monitoring trigger. Upon confirmation that the effluent toxicity has been removed, the Discharger may cease accelerated monitoring and resume regular chronic toxicity monitoring.

(c) If the result of any accelerated toxicity test exceeds the monitoring trigger, the Discharger shall cease accelerated monitoring and begin a TRE to investigate the cause(s) of, and identify corrective actions to reduce or eliminate effluent toxicity. Within thirty (30) days of notification by the laboratory of any test result exceeding the monitoring trigger during accelerated monitoring, the Discharger shall submit a TRE Action Plan to the Central Valley Water Board including, at minimum:

(1) Specific actions the Discharger will take to investigate and identify the cause(s) of toxicity, including a TRE WET monitoring schedule;

(2) Specific actions the Discharger will take to mitigate the impact of the discharge and prevent the recurrence of toxicity; and

(3) A schedule for these actions.

b. **Filtration Operations Study.** After a sufficient degree of operational experience following commencement of operation of filtration facilities as designed, built and operated, including at least 3 years of circumstances described in the Future Facility description in Section II.A.2 of the Fact Sheet where some biological nutrient removal (BNR) effluent does not receive filtration, a study of November-April performance of the filtration and disinfection system will be required of the Discharger. The study, to be conducted at a time determined by the Central Valley Water Board, will summarize data including the amount (on a daily basis and annual basis) of effluent that did not receive filtration, influent and effluent flows, filter effluent turbidity, filter loading rates, effluent *Giardia* and *Cryptosporidium* data, and effluent *E. coli* and total coliform data.

c. **Phase 1 Methylmercury Control Study.** In accordance with the Basin Plan's Delta Mercury Control Program and the compliance schedule included in this Order for methylmercury (Section VI.C.7.c), the Discharger shall participate in the Central Valley Clean Water Association (CVCWA) Coordinated Methylmercury Control Study (Study) to evaluate existing control methods and, as needed, develop additional control methods that could be implemented to achieve the methylmercury waste load allocation. A work plan was submitted by CVCWA on 20 April 2013.

The Study shall evaluate the feasibility of reducing sources more than the minimum amount needed to achieve the methylmercury allocation. The Study also may include an evaluation of innovative actions, watershed approaches, offsets projects, and other short and long-term actions that result in reducing inorganic (total) mercury and methylmercury to address the accumulation of methylmercury in fish tissue and to reduce methylmercury exposure. The Study may evaluate the effectiveness of using inorganic (total) mercury controls to control methylmercury discharges.

The Study shall include a description of methylmercury and/or inorganic (total) mercury management practices identified in Phase 1; an evaluation of the effectiveness, costs, potential environmental effects, and overall feasibility of the control actions. The Study shall also include proposed implementation plans and schedules to comply with methylmercury allocations as soon as possible. The Study shall be submitted to the Central Valley Water Board by **20 October 2018**.

The Executive Officer may, after public notice, extend the due date up to 2 years if the Discharger demonstrates it is making significant progress towards developing, implementing, and/or completing the Study and reasonable attempts have been made to secure funding for the Study, but the Discharger has experienced severe budget shortfalls.

d. **Emergency Storage Basin Cleaning and Isolation System Study and Standard Operating Procedures.** The Discharger shall conduct a study and/or monitoring to demonstrate the emergency storage basin cleaning and isolation systems will not allow for wastewater pathogens to be reintroduced to the final effluent following the prior use of the emergency storage basins for non-final (e.g., untreated or partially-treated wastewater). The Discharger shall also develop standard operating procedures for use and cleaning of the emergency storage basins. The Discharger shall submit a Work Plan and Schedule for conducting the study and developing the standard operating procedures to the Central Valley Water Board for Executive Officer approval **by 1 June 2017**. The Discharger shall submit the final study results and standard operating procedures to the Central Valley Water Board for Executive Officer approval in accordance with the Work Plan and Schedule.

Upon completion of the tertiary filtration upgrades (described in Attachment F, Section II.A.2) and Executive Officer approval of the final study results and standard operating procedures, the Discharger may begin effluent monitoring for BOD_5, TSS, and total coliform organisms at Monitoring Location TER-001 for purposes of determining compliance with the final effluent limitations, and effluent monitoring for total coliform organisms may cease at Monitoring Location EFF-001.

e. **Temperature Receiving Water Limitations Compliance Methodology. Not later than 31 March 2017**, the Discharger shall evaluate the current method of compliance determination with temperature receiving water limitations V.A.15.a and V.A.15.b and propose a method that may be better suited for compliance determination taking into consideration the planned Facility upgrades. Upon approval by the Executive Officer, the updated method determination shall become part of this permit for purposes of determining compliance.

3. **Best Management Practices and Pollution Prevention**

a. **Pollution Prevention Plan (PPP) for Mercury.** The Discharger shall continue to implement a PPP for mercury in accordance with Water Code section 13263.3(d)(3), per the compliance schedule in this Order for methylmercury (section VI.C.7.c). Progress reports shall be submitted annually in accordance with the Monitoring and Reporting Program (Attachment E, section X.D.1.). The progress reports shall discuss the effectiveness of the PPP in the reduction of mercury in the discharge, include a summary of mercury and methylmercury monitoring results, and discuss updates to the PPP.

b. **Mercury Exposure Reduction Program.** The Discharger shall participate in a Mercury Exposure Reduction Program (MERP) in accordance with the Basin Plan's Delta Mercury Control Program. The Discharger elected to provide financial support in the collective MERP with other Delta dischargers, rather than be individually responsible for any MERP activities. An exposure reduction work plan for Executive Officer approval was submitted on 20 October 2013. The objective of the MERP is to reduce mercury exposure of Delta fish consumers most likely affected by mercury. The work plan shall address the MERP objective, elements, and the Discharger's coordination with other stakeholders. The minimum requirements for the exposure reduction work plan are outlined in the Fact Sheet (Attachment F, section VI.B.3.b). The Discharger shall continue to participate in the group effort to implement the work plan through 2020 or until they comply with all requirements related to the individual or subarea methylmercury allocation. The Discharger shall notify the Central Valley Water Board if it plans to perform mercury exposure reduction activities individually.

c. **Salinity Evaluation and Minimization Plan.** The Discharger shall continue to implement its salinity evaluation and minimization plan to identify and address sources of salinity discharged from the Facility. The Discharger shall evaluate the effectiveness of the salinity evaluation and minimization plan and provide a summary with the Report of Waste Discharge, due 180 days prior to the permit expiration date. The summary shall include municipal water supply quality and quantity data from water purveyors within the Discharger's service area. Total dissolved solids and electrical conductivity or specific conductance shall be reported as a weighted average of groundwater and surface water quality using the most recent published information from the water purveyors and other databases available to the public.

4. Construction, Operation and Maintenance Specifications

a. **Filtration System Operating Specifications.** Effective 9 May 2023, the turbidity of the filter effluent measured at Monitoring Location FIL-001 shall not exceed:

i. 2 NTU as a daily average;

ii. 5 NTU more than 5 percent of the time within a 24-hour period; and

iii. 10 NTU, at any time.

b. **Emergency Storage Basin Operating Requirements**

i. The treatment facilities shall be designed, constructed, operated, and maintained to prevent inundation or washout due to floods with a 100-year return frequency.

ii. Public contact with wastewater shall be precluded through such means as fences, signs, and other acceptable alternatives.

iii. Ponds shall be managed to prevent breeding of mosquitoes. In particular,

(a) An erosion control program should assure that small coves and irregularities are not created around the perimeter of the water surface.

(b) Weeds shall be minimized.

(c) Dead algae, vegetation, and debris shall not accumulate on the water surface.

iv. Freeboard for the total emergency storage basin system shall never be less than 2 feet (measured vertically to the lowest point of overflow).

v. The discharge of waste classified as "hazardous" as defined in section 2521(a) of title 23 of the CCR, or "designated", as defined in Water Code section 13173, to the treatment ponds is prohibited.

vi. Objectionable odors originating at this Facility shall not be perceivable beyond the limits of the wastewater treatment and disposal areas (or property owned by the Discharger).

5. Special Provisions for Municipal Facilities (POTW's Only)

a. **Pretreatment Requirements**

i. The Discharger shall be responsible and liable for the performance of all Control Authority pretreatment requirements contained in 40 C.F.R. part 403, including any subsequent regulatory revisions to 40 C.F.R. part 403. Where 40 C.F.R. part 403 or subsequent revision places mandatory actions upon the Discharger as Control Authority but does not specify a timetable for completion of the actions, the Discharger shall complete the required actions within 6 months from the issuance date of this permit or the effective date of the 40 C.F.R. part 403 revisions, whichever comes later. For violations of pretreatment requirements, the Discharger shall be subject to enforcement actions, penalties, fines, and other remedies by U.S. EPA or other appropriate parties, as provided in the CWA. U.S. EPA may initiate enforcement action against a nondomestic user for noncompliance with applicable standards and requirements as provided in the CWA.

ii. The Discharger shall enforce the requirements promulgated under sections 307(b), 307(c), 307(d), and 402(b) of the CWA with timely, appropriate and effective enforcement actions. The Discharger shall cause all nondomestic users subject to federal categorical standards to achieve compliance no later than the date specified in those requirements or, in the case of a new nondomestic user, upon commencement of the discharge.

iii. The Discharger shall perform the pretreatment functions as required in 40 C.F.R. part 403 including, but not limited to:

(a) Implement the necessary legal authorities as provided in 40 C.F.R. section 403.8(f)(1);

(b) Enforce the pretreatment requirements under 40 C.F.R. section 403.5 and 403.6;

(c) Implement the programmatic functions as provided in 40 C.F.R. section 403.8(f)(2); and

(d) Provide the requisite funding and personnel to implement the pretreatment program as provided in 40 C.F.R. section 403.8(f)(3).

iv. **Pretreatment Reporting Requirements.** Pretreatment reporting requirements are included in the Monitoring and Reporting Program, section X.D.5 of Attachment E.

b. **Collection System.** On 2 May 2006, the State Water Board adopted State Water Board Order No. 2006-0003-DWQ, Statewide General WDR's for Sanitary Sewer Systems. The Discharger shall be subject to the requirements of Order No. 2006-0003-DWQ and any future revisions thereto. Order No. 2006-0003-DWQ requires that all public agencies that currently own or operate sanitary sewer systems apply for coverage under the general WDR's. The Discharger has applied for and has been approved for coverage under Order 2006-0003-DWQ for operation of its wastewater collection system.

c. **Anaerobically Digestible Material.** The Discharger is currently accepting anaerobically digestible material through its fats, oils and grease (FOG) reception system for injection into an anaerobic digester for co-digestion. **By 1 March 2017**, the Discharger shall develop and implement standard operating procedures (SOP's) for this activity. The SOP's shall address material handling, including unloading, screening, or other processing prior to anaerobic digestion; transportation; spill prevention; and spill response. In addition, the SOP's shall address avoidance of the introduction of materials that could cause interference, pass-through, or upset of the treatment processes; avoidance of prohibited material, vector control, odor control, operation and maintenance, and the disposition of any solid waste segregated from introduction to the digester. The Discharger shall provide training to its staff on the SOP's and shall maintain records for a minimum of three years for each load received, describing the hauler, waste type, and quantity received. In addition, the Discharger shall maintain records for a minimum of three years for the disposition, location, and quantity of accumulated pre-digestion-segregated solid waste hauled off-site.

6. Other Special Provisions

a. **Seasonal Title 22, or Equivalent, Disinfection Requirements. Effective 9 May 2023,** from May to October wastewater shall be oxidized, coagulated, filtered, and adequately disinfected pursuant to the DDW reclamation criteria, CCR, title 22, division 4, chapter 3, (Title 22), or equivalent, in accordance with the compliance schedule in Section VI.C.7.a.

7. Compliance Schedules

a. **Compliance Schedule for Seasonal Title 22, or Equivalent, Disinfection Requirements.** By **9 May 2023**, the Discharger shall comply with the seasonal disinfection requirements (Section VI.C.6.a), final seasonal effluent limitations for total coliform organisms (Section IV.A.1.g), final effluent limits for BOD_5 and TSS (Section IV.A.1.a), and the filtration system operating specifications (Section VI.C.4.a). Until final compliance, the Discharger shall submit progress reports in accordance with the Monitoring and Reporting Program (Attachment E, section X.D.1).

Task		Date Due
i.	Submit Method of Compliance Workplan/Schedule	Complete
ii.	Progress Reports[1]	**9 July**, annually, until final compliance
iii.	Begin CEQA process for Compliance Project	**Complete**
iv.	Begin construction of Compliance Project	**16 May 2020**
v.	Submit Seasonal Operations Plan[2]	**No later than 30 days prior to full compliance**
vi.	Full Compliance	**9 May 2023**

[1] The progress reports shall detail what steps have been implemented towards achieving compliance with waste discharge requirements, including studies, construction progress, evaluation of measures implemented, and recommendations for additional measures as necessary to achieve full compliance by the final compliance date.

[2] The plan shall incorporate as a goal to reasonably limit the amount of unfiltered discharge and describe anticipated operations of the Facility when flows in excess of filter design capacity occur considering influent flows to the entire Facility, available storage, river flows, impending meteorological conditions, and any other relevant operational considerations. This plan will be periodically updated, as necessary, based on accumulated operating data and experience.

b. **Compliance Schedule for Final Effluent Limitations for Ammonia.** This Order requires compliance with the final effluent limitations for ammonia by **11 May 2021**. The Discharger shall comply with the following time schedule to ensure compliance with the final effluent limitations:

Task		Date Due
i.	Submit Method of Compliance Workplan/Schedule	Complete
ii.	Submit and Implement PPP[1] for ammonia	Complete
iii.	Progress Reports[2]	**9 July,** annually, until final compliance
iv.	Begin CEQA process for Compliance Project	Complete
v.	Begin construction of Compliance Project	**19 May 2018**
vii.	Full Compliance	**11 May 2021**

[1] The Discharger shall continue to implement the PPP.

[2] The progress reports shall detail what steps have been implemented towards achieving compliance with waste discharge requirements, including studies, construction progress, evaluation of measures implemented, and recommendations for additional measures as necessary to achieve full compliance by the final compliance date.

c. **Compliance Schedule for Final Effluent Limitations for Methylmercury.** This Order requires compliance with the final effluent limitations for methylmercury by **31 December 2030**. The Discharger shall comply with the following time schedule to ensure compliance with the final effluent limitations:

Task		Date Due
	Phase 1	
i.	Submit CVCWA Coordinated Methylmercury Control Study Work Plan	Complete
ii.	Update and Implement PPP[1] for Mercury (per Section VI.C.3.a)	Complete
iii.	Implement CVCWA Coordinated Methylmercury Control Study Work Plan	**Immediately following Executive Officer approval**
iv.	Annual Progress Reports[2]	**1 March, annually**
v.	Submit Final CVCWA Coordinated Methylmercury Control Study	**20 October 2018[3]**
	Phase 2	
vi.	Implement methylmercury control programs	**TBD[4]**
vii.	Full Compliance	**31 December 2030**

Task	Date Due

[1] The PPP for mercury shall be implemented in accordance with Section VI.C.3.a.

[2] Beginning **1 March 2017** and annually thereafter until the Facility achieves compliance with the final effluent limitations for methylmercury, the Discharger shall submit annual progress reports on pollution minimization activities implemented and evaluation of their effectiveness, including a summary of total mercury and methylmercury monitoring results.

[3] The Executive Officer may, after public notice, extend the due date for the Final CVCWA Coordinated Methylmercury Control Study up to 2 years if the Discharger demonstrates it is making significant progress towards developing, implementing, and/or completing the Study and reasonable attempts have been made to secure funding for the Study, but the Discharger has experienced severe budget shortfalls.

[4] To be determined. Following Phase 1 the Central Valley Water Board will conduct a Phase 1 Delta Mercury Control Program Review that considers: modification of methylmercury goals, objectives, allocations, final compliance date, etc. Consequently, the start of Phase 2 and the final compliance date is uncertain at the time this Order was adopted.

VII. COMPLIANCE DETERMINATION

A. BOD_5 and TSS Effluent Limitations (Sections IV.A.1.a, IV.A.1.b, and IV.A.2.a). Compliance with the final effluent limitations for BOD_5 and TSS required in Limitations and Discharge Requirements section IV.A.1.a and IV.A.2.a shall be ascertained by 24-hour composite samples. Compliance with effluent limitations required in Limitations and Discharge Requirements section IV.A.1.b for percent removal shall be calculated using the arithmetic mean of BOD_5 and TSS in effluent samples collected over a monthly period as a percentage of the arithmetic mean of the values for influent samples collected at approximately the same times during the same period.

B. Methylmercury and Total Mercury Mass Loading Effluent Limitations (Sections IV.A.1.j and IV.A.2.e). The procedures for calculating mass loadings are as follows:

1. The total pollutant mass load for each individual calendar month shall be determined using an average of all concentration data collected that month and the corresponding total monthly flow. All effluent monitoring data collected under the monitoring and reporting program, pretreatment program, and any special studies shall be used for these calculations. The total annual mass loading shall be the sum of the individual calendar months.

2. In calculating compliance, the Discharger shall count all non-detect measures at one-half of the detection level. If compliance with the effluent limitation is not attained due to the non-detect contribution, the Discharger shall improve and implement available analytical capabilities and compliance shall be evaluated with consideration of the detection limits.

C. Average Dry Weather Flow Effluent Limitations (Section IV.A.1.h). The average dry weather discharge flow represents the daily average flow when groundwater is at or near normal and runoff is not occurring. Compliance with the average dry weather flow effluent limitations will be determined annually based on the average daily flow over three consecutive dry weather months (e.g., July, August, and September).

D. Total Coliform Organisms Effluent Limitations (Sections IV.A.1.g and IV.A.2.d)

1. **7-Day Median.** For each day that an effluent sample is collected and analyzed for total coliform organisms, compliance with the 7-day median final effluent limitation (Section IV.A.1.g.i.(a)) shall be determined by calculating the median concentration of total coliform bacteria in the effluent utilizing the bacteriological results of the last 7 days. For example, if a sample is collected on a Wednesday, the result from that sampling event and all results from the previous 6 days (i.e., Tuesday, Monday, Sunday, Saturday,

Friday, and Thursday) are used to calculate the 7-day median. The first compliance determination is made on 7 May of a year and the last compliance determination is made on 31 October of a year.

2. **Monthly Median.** Compliance with the total coliform monthly median final effluent limitation (Section IV.A.1.g.ii.(a)) shall be determined by calculating the median value of total coliform bacteria in the effluent utilizing all total coliform results during each calendar month in which the monthly median limitation applies (i.e., November – April).

3. **Weekly Median.** Compliance with the interim weekly median effluent limitation (Section IV.A.2.d.i) and final weekly median effluent limitation (Section IV.A.1.g.ii.(b)) shall be determined by calculating the median value of total coliform bacteria in the effluent utilizing all total coliform results from Sunday through Saturday of each calendar week.

E. **Total Residual Chlorine Effluent Limitations (Sections IV.A.1.f and IV.A.2.c).** Continuous monitoring analyzers for chlorine residual or for dechlorination agent residual in the effluent are appropriate methods for compliance determination. A positive residual dechlorination agent in the effluent indicates that chlorine is not present in the discharge, which demonstrates compliance with the effluent limitations. This type of monitoring can also be used to prove that some chlorine residual exceedances are false positives. Continuous monitoring data showing either a positive dechlorination agent residual or a chlorine residual at or below the prescribed limit are sufficient to show compliance with the total residual chlorine effluent limitations, as long as the instruments are maintained and calibrated in accordance with the manufacturer's recommendations.

Any excursion above the 1-hour average or 4-day average total residual chlorine effluent limitations is a violation. If the Discharger conducts continuous monitoring and the Discharger can demonstrate, through data collected from a back-up monitoring system or through positive dechlorination residual, that a chlorine spike recorded by the continuous monitor was not actually due to chlorine, then any excursion resulting from the recorded spike will not be considered an exceedance. False positives shall be noted as such in the monitoring report. Both the chlorine spike and the information that the Discharger relied on to show that there wasn't a violation shall be reported. Records supporting validation of false positives shall be maintained in accordance with Section IV Standard Provisions (Attachment D).

F. **Mass Effluent Limitations.** The mass effluent limitations contained in the Final Effluent Limitations IV.A.1.a and Interim Effluent Limitations IV.A.2.a and IV.A.2.b are based on the permitted average dry weather flow and calculated as follows:

Mass (lbs/day) = Flow (MGD) x Concentration (mg/L) x 8.34 (conversion factor)

If the effluent flow exceeds the permitted average dry weather flow during wet-weather seasons, the effluent mass limitations contained in Final Effluent Limitations IV.A.1.a and Interim Effluent Limitations IV.A.2.a and IV.A.2.b shall not apply. If the effluent flow is below the permitted average dry weather flow during wet-weather seasons, the effluent mass limitations do apply.

G. **Priority Pollutant Effluent Limitations.** Compliance with effluent limitations for priority pollutants shall be determined in accordance with Section 2.4.5 of the SIP, as follows:

1. Dischargers shall be deemed out of compliance with an effluent limitation, if the concentration of the priority pollutant in the monitoring sample is greater than the effluent limitation and greater than or equal to the reporting level (RL).

2. Dischargers shall be required to conduct a Pollutant Minimization Program (PMP) in accordance with section 2.4.5.1 of the SIP when there is evidence that the priority pollutant is present in the effluent above an effluent limitation and either:

a. A sample result is reported as detected, but not quantified (DNQ) and the effluent limitation is less than the RL; or

b. A sample result is reported as non-detect (ND) and the effluent limitation is less than the method detection limit (MDL).

3. When determining compliance with a maximum daily effluent limitation (MDEL), average weekly effluent limitation (AWEL), or an average monthly effluent limitation (AMEL) and more than one sample result is available in the monitoring period, the discharger shall compute the arithmetic mean unless the data set contains one or more reported determinations of DNQ or ND. In those cases, the discharger shall compute the median in place of the arithmetic mean in accordance with the following procedure:

   a. The data set shall be ranked from low to high, reported ND determinations lowest, DNQ determinations next, followed by quantified values (if any). The order of the individual ND or DNQ determinations is unimportant.

   b. The median value of the data set shall be determined. If the data set has an odd number of data points, then the median is the middle value. If the data set has an even number of data points, then the median is the average of the two values around the middle unless one or both of the points are ND or DNQ, in which case the median value shall be the lower of the two data points where DNQ is lower than a value and ND is lower than DNQ.

4. If a sample result, or the arithmetic mean or median of multiple sample results, is below the RL, and there is evidence that the priority pollutant is present in the effluent above an effluent limitation and the discharger conducts a PMP (as described in section 2.4.5.1), the discharger shall not be deemed out of compliance.

H. **Chronic Whole Effluent Toxicity Effluent Limitation (Section IV.A.1.d)**. Compliance with the accelerated monitoring and TRE provisions of Provision VI.C.2.a shall constitute compliance with the effluent limitation.

I. **Acute Whole Effluent Toxicity Effluent Limitation (Section IV.A.1.c).** For each 96-hour acute bioassay test result, compliance with the acute WET 90% median survival effluent limitation shall be determined based on the median of that test result and the previous two test results.

J. **Turbidity Receiving Water Limitation (Section V.A.17).** Compliance shall be determined using data samples from Monitoring Location RSWD-003 and analyzed with data samples for natural turbidity at Monitoring Location RSWU-001.

K. **Dissolved Oxygen Receiving Water Limitation (Section V.A.5.).** Compliance shall be determined using data samples from Monitoring Location RSWD-003.

L. **pH Receiving Water Limitation (Section V.A.8.).** Compliance shall be determined using data samples from Monitoring Location RSWD-003.

M. **Temperature Receiving Water Limitation (Section V.A.15.).** Compliance shall be determined using data samples from Monitoring Location RSWD-003 and analyzed with data samples for natural temperature at Monitoring Location RSWU-001.

N. **Chlorpyrifos and Diazinon Effluent Limitations (Section IV.A.1.i).** Compliance shall be determined by calculating the sum (S), as provided in this Order, with analytical results that are reported as "non-detectable" concentrations to be considered to be zero.

O. **Use of Delta Regional Monitoring Program and Other Receiving Water Data to Determine Compliance with Receiving Water Limitations.** Delta Regional Monitoring Program data and other receiving water monitoring data that is not specifically required to be

conducted by the Discharger under this permit will not be used directly to determine that the discharge is in violation of this Order. The Discharger may, however, conduct any site-specific receiving water monitoring deemed appropriate by the Discharger that is not conducted by the Delta Regional Monitoring Program and submit that monitoring data. As described in section VIII of Attachment E, such data may be used, if scientifically defensible, in conjunction with other receiving water data, effluent data, receiving water flow data, and other pertinent information to determine whether or not a discharge is in compliance with this Order.

ATTACHMENT A – DEFINITIONS

Arithmetic Mean (μ)
Also called the average, is the sum of measured values divided by the number of samples. For ambient water concentrations, the arithmetic mean is calculated as follows:

Arithmetic mean = $\mu = \Sigma x / n$ where: Σx is the sum of the measured ambient water concentrations, and n is the number of samples.

Average Monthly Effluent Limitation (AMEL)
The highest allowable average of daily discharges over a calendar month, calculated as the sum of all daily discharges measured during a calendar month divided by the number of daily discharges measured during that month.

Average Weekly Effluent Limitation (AWEL)
The highest allowable average of daily discharges over a calendar week (Sunday through Saturday), calculated as the sum of all daily discharges measured during a calendar week divided by the number of daily discharges measured during that week.

Bioaccumulative
Those substances taken up by an organism from its surrounding medium through gill membranes, epithelial tissue, or from food and subsequently concentrated and retained in the body of the organism.

Carcinogenic
Pollutants are substances that are known to cause cancer in living organisms.

Coefficient of Variation (CV)
CV is a measure of the data variability and is calculated as the estimated standard deviation divided by the arithmetic mean of the observed values.

Daily Discharge
Daily Discharge is defined as either: (1) the total mass of the constituent discharged over the calendar day (12:00 am through 11:59 pm) or any 24-hour period that reasonably represents a calendar day for purposes of sampling (as specified in the permit), for a constituent with limitations expressed in units of mass or; (2) the unweighted arithmetic mean measurement of the constituent over the day for a constituent with limitations expressed in other units of measurement (e.g., concentration).

The daily discharge may be determined by the analytical results of a composite sample taken over the course of one day (a calendar day or other 24-hour period defined as a day) or by the arithmetic mean of analytical results from one or more grab samples taken over the course of the day.

For composite sampling, if 1 day is defined as a 24-hour period other than a calendar day, the analytical result for the 24-hour period will be considered as the result for the calendar day in which the 24-hour period ends.

Detected, but Not Quantified (DNQ)
DNQ are those sample results less than the RL, but greater than or equal to the laboratory's MDL. Sample results reported as DNQ are estimated concentrations.

Dilution Credit
Dilution Credit is the amount of dilution granted to a discharge in the calculation of a water quality-based effluent limitation, based on the allowance of a specified mixing zone. It is calculated from the

dilution ratio or determined through conducting a mixing zone study or modeling of the discharge and receiving water.

Effluent Concentration Allowance (ECA)
ECA is a value derived from the water quality criterion/objective, dilution credit, and ambient background concentration that is used, in conjunction with the coefficient of variation for the effluent monitoring data, to calculate a long-term average (LTA) discharge concentration. The ECA has the same meaning as waste load allocation (WLA) as used in U.S. EPA guidance (Technical Support Document For Water Quality-based Toxics Control, March 1991, second printing, EPA/505/2-90-001).

Enclosed Bays
Enclosed Bays means indentations along the coast that enclose an area of oceanic water within distinct headlands or harbor works. Enclosed bays include all bays where the narrowest distance between the headlands or outermost harbor works is less than 75 percent of the greatest dimension of the enclosed portion of the bay. Enclosed bays include, but are not limited to, Humboldt Bay, Bodega Harbor, Tomales Bay, Drake's Estero, San Francisco Bay, Morro Bay, Los Angeles-Long Beach Harbor, Upper and Lower Newport Bay, Mission Bay, and San Diego Bay. Enclosed bays do not include inland surface waters or ocean waters.

Estimated Chemical Concentration
The estimated chemical concentration that results from the confirmed detection of the substance by the analytical method below the ML value.

Estuaries
Estuaries means waters, including coastal lagoons, located at the mouths of streams that serve as areas of mixing for fresh and ocean waters. Coastal lagoons and mouths of streams that are temporarily separated from the ocean by sandbars shall be considered estuaries. Estuarine waters shall be considered to extend from a bay or the open ocean to a point upstream where there is no significant mixing of fresh water and seawater. Estuarine waters included, but are not limited to, the Sacramento-San Joaquin Delta, as defined in Water Code section 12220, Suisun Bay, Carquinez Strait downstream to the Carquinez Bridge, and appropriate areas of the Smith, Mad, Eel, Noyo, Russian, Klamath, San Diego, and Otay rivers. Estuaries do not include inland surface waters or ocean waters.

Inland Surface Waters
All surface waters of the state that do not include the ocean, enclosed bays, or estuaries.

Instantaneous Maximum Effluent Limitation
The highest allowable value for any single grab sample or aliquot (i.e., each grab sample or aliquot is independently compared to the instantaneous maximum limitation).

Instantaneous Minimum Effluent Limitation
The lowest allowable value for any single grab sample or aliquot (i.e., each grab sample or aliquot is independently compared to the instantaneous minimum limitation).

Maximum Daily Effluent Limitation (MDEL)
The highest allowable daily discharge of a pollutant, over a calendar day (or 24-hour period). For pollutants with limitations expressed in units of mass, the daily discharge is calculated as the total mass of the pollutant discharged over the day. For pollutants with limitations expressed in other units of measurement, the daily discharge is calculated as the arithmetic mean measurement of the pollutant over the day.

Median
The middle measurement in a set of data. The median of a set of data is found by first arranging the measurements in order of magnitude (either increasing or decreasing order). If the number of measurements (n) is odd, then the median = $X_{(n+1)/2}$. If n is even, then the median = $(X_{n/2} + X_{(n/2)+1})/2$ (i.e., the midpoint between the n/2 and n/2+1).

Method Detection Limit (MDL)
MDL is the minimum concentration of a substance that can be measured and reported with 99 percent confidence that the analyte concentration is greater than zero, as defined in in 40 C.F.R. part 136, Attachment B, revised as of July 3, 1999.

Minimum Level (ML)
ML is the concentration at which the entire analytical system must give a recognizable signal and acceptable calibration point. The ML is the concentration in a sample that is equivalent to the concentration of the lowest calibration standard analyzed by a specific analytical procedure, assuming that all the method specified sample weights, volumes, and processing steps have been followed.

Mixing Zone
Mixing Zone is a limited volume of receiving water that is allocated for mixing with a wastewater discharge where water quality criteria can be exceeded without causing adverse effects to the overall water body.

Not Detected (ND)
Sample results which are less than the laboratory's MDL.

Ocean Waters
The territorial marine waters of the State as defined by California law to the extent these waters are outside of enclosed bays, estuaries, and coastal lagoons. Discharges to ocean waters are regulated in accordance with the State Water Board's California Ocean Plan.

Persistent Pollutants
Persistent pollutants are substances for which degradation or decomposition in the environment is nonexistent or very slow.

Pollutant Minimization Program (PMP)
PMP means waste minimization and pollution prevention actions that include, but are not limited to, product substitution, waste stream recycling, alternative waste management methods, and education of the public and businesses. The goal of the PMP shall be to reduce all potential sources of a priority pollutant(s) through pollutant minimization (control) strategies, including pollution prevention measures as appropriate, to maintain the effluent concentration at or below the water quality-based effluent limitation. Pollution prevention measures may be particularly appropriate for persistent bioaccumulative priority pollutants where there is evidence that beneficial uses are being impacted. The Central Valley Water Board may consider cost effectiveness when establishing the requirements of a PMP. The completion and implementation of a Pollution Prevention Plan, if required pursuant to Water Code section 13263.3(d), shall be considered to fulfill the PMP requirements.

Pollution Prevention
Pollution Prevention means any action that causes a net reduction in the use or generation of a hazardous substance or other pollutant that is discharged into water and includes, but is not limited to, input change, operational improvement, production process change, and product reformulation (as defined in Water Code section 13263.3). Pollution prevention does not include actions that merely shift a pollutant in wastewater from one environmental medium to another environmental medium, unless

clear environmental benefits of such an approach are identified to the satisfaction of the State Water Resources Control Board (State Water Board) or Central Valley Water Board.

Satellite Collection System
The portion, if any, of a sanitary sewer system owned or operated by a different public agency than the agency that owns and operates the wastewater treatment facility that a sanitary sewer system is tributary to.

Source of Drinking Water
Any water designated as municipal or domestic supply (MUN) in a Central Valley Water Board Basin Plan.

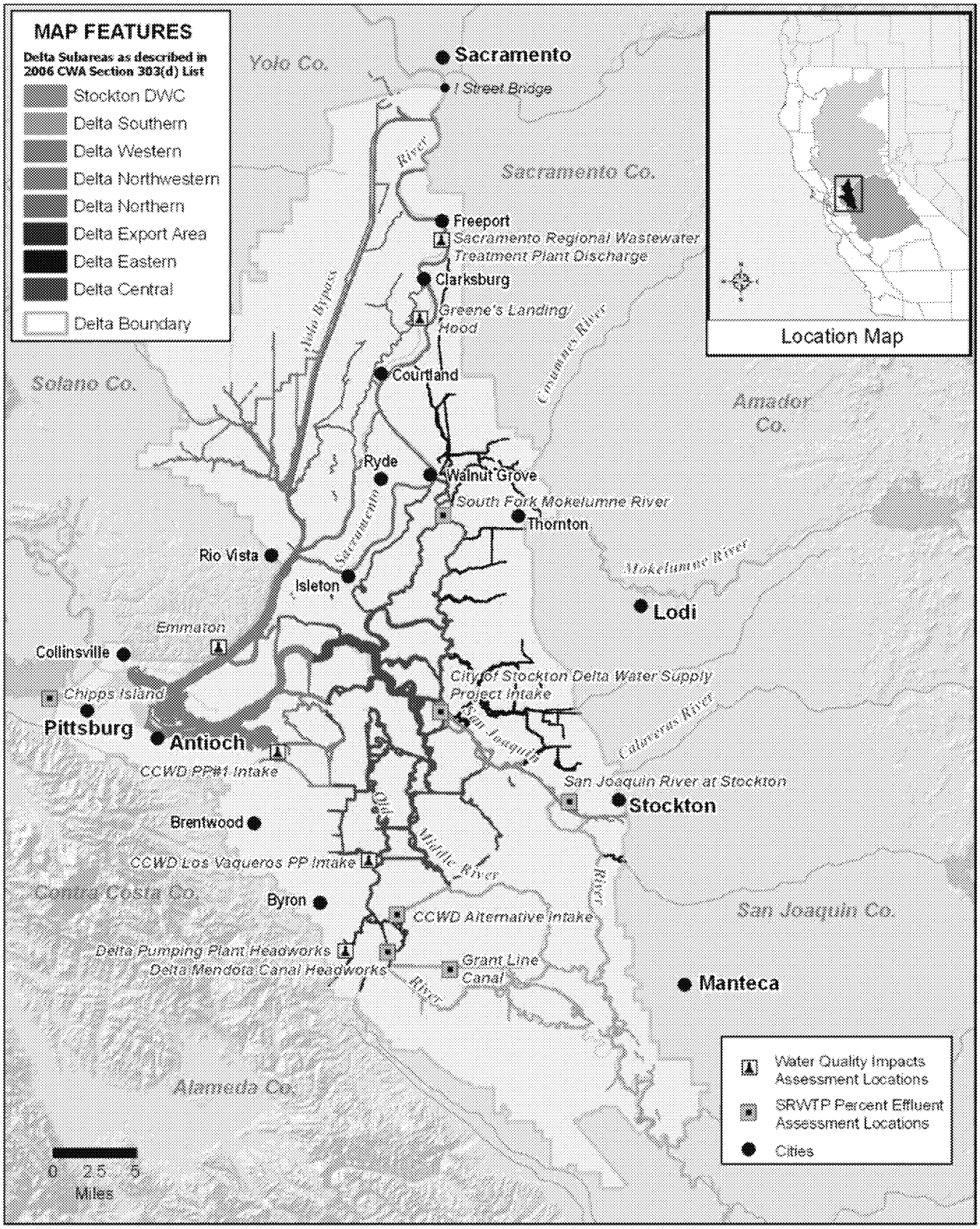
Standard Deviation (σ)
Standard Deviation is a measure of variability that is calculated as follows:

$$\sigma = (\sum[(x - \mu)^2]/(n - 1))^{0.5}$$

where:
x is the observed value;
μ is the arithmetic mean of the observed values; and
n is the number of samples.

Toxicity Reduction Evaluation (TRE)
TRE is a study conducted in a step-wise process designed to identify the causative agents of effluent or ambient toxicity, isolate the sources of toxicity, evaluate the effectiveness of toxicity control options, and then confirm the reduction in toxicity. The first steps of the TRE consist of the collection of data relevant to the toxicity, including additional toxicity testing, and an evaluation of facility operations and maintenance practices, and best management practices. A Toxicity Identification Evaluation (TIE) may be required as part of the TRE, if appropriate. (A TIE is a set of procedures to identify the specific chemical(s) responsible for toxicity. These procedures are performed in three phases (characterization, identification, and confirmation) using aquatic organism toxicity tests.)

ATTACHMENT B – MAP



ATTACHMENT C – FLOW SCHEMATIC

Figure C-1. Current Flow Schematic

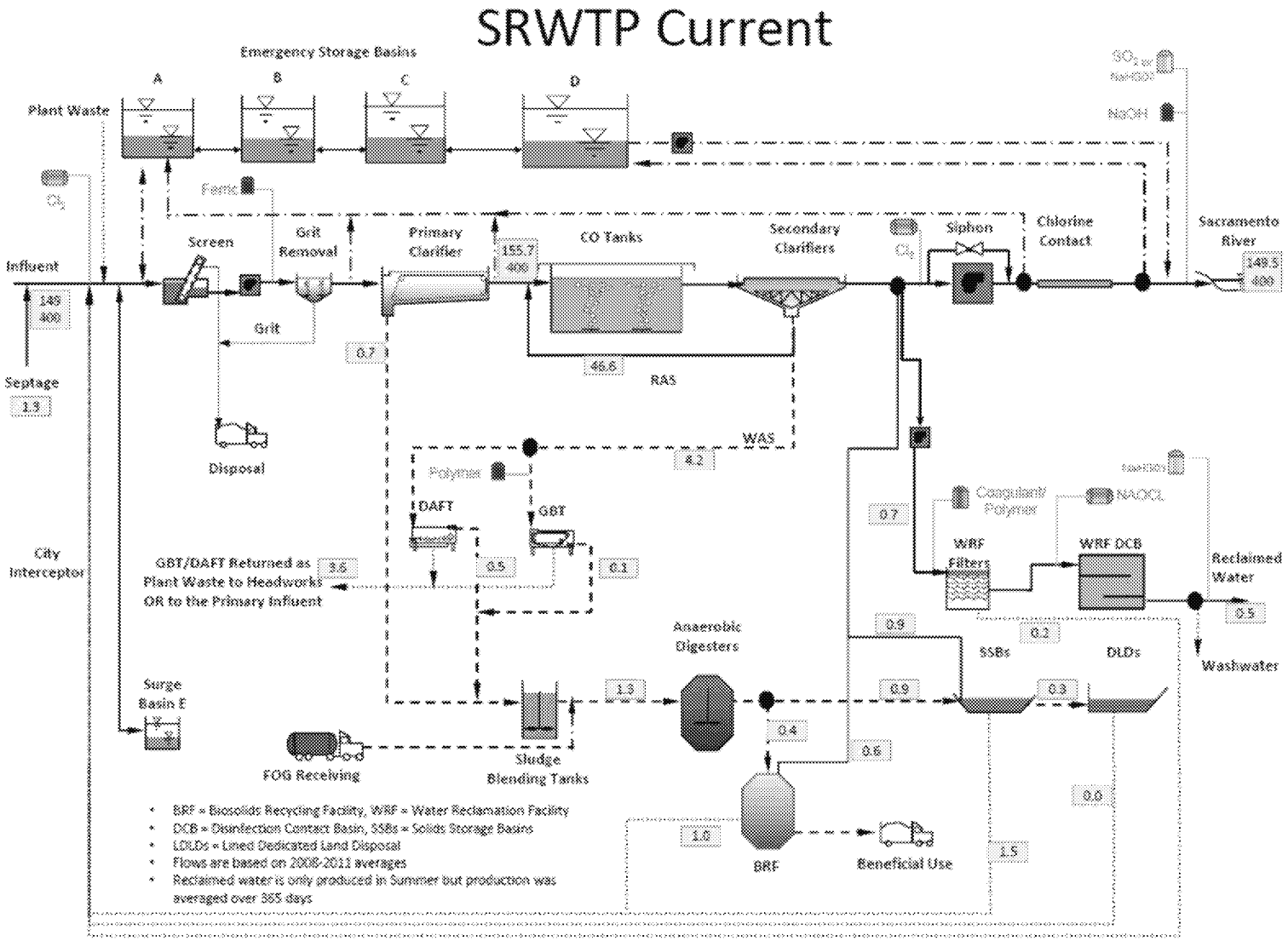


Figure C-2. Future Flow Schematic